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A study analyzed the criteria available at the time of hiring elementary teachers to determine if any of the criteria would predict teachers' ratings at the end of three years of teaching. A review of research in the area yielded 29 factors thought to be indicative of teacher success. Subjects were 159 teachers who had completed their probationary period and were hired as tenured teachers. Supervisors completed a 5-point rating scale placing each in the top 10 percent, the next 20 percent, the middle 50 percent, etc. of all known teachers: 67 received the highest possible appraisal, 84 the next higher, 8 average appraisal, and none the below-average ratings. Final ratings for each were compared to each of the 29 predictors (obtained from personnel application blanks, college transcripts, and service appraisal blanks) to determine which combinations would make the best estimate of final ratings. Multiple regression analysis of the 29 predictors developed a prediction equation that was 60 percent accurate in forecasting the final rating of the teachers (as superior or above average). The suggested implications are that (1) supervisors employ only individuals who are classified as "superior" or "above average" as teachers, or (2) a measuring instrument which will more accurately reflect teacher effectiveness should be developed. (Correlation coefficients for each variable and an 11-item bibliography are included.) (JS)

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AN ANALYSIS OF SELECTED PRESAGE CRITERIA AND SUPERVISORS APPRAISAL OF TEACHERS' EFFECTIVENESS

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at

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The purpose of this study was to analyze empirically the criteria available at the time of hiring elementary teachers to determine if any of the criteria would predict teachers' rating at the end of three years of teaching.

Since the teachers had completed their probationary period and were hired as tenured teachers at the time of the rating, it was assumed the supervisors would be more judicious in evaluating the teachers' effectiveness for this rating period. A further assumption was the assertion common to most supervisors that "they know who their good teachers are." The rating scale asks them to rate the teacher in question as compared to all known teachers, with the suggestion that a "5" rating indicated a teacher in the top 10% of all teachers, a "4" placed the teacher in the next 20% and a "3" indicated the middle 40% of all teachers.

Selection of Presage Criteria

The review of the research in this area indicated a large number of factors thought to be indicative of teacher success. The factors available for analysis are contained on personnel application blanks, college transcripts, and service appraisal blanks.

A major source of information concerning teacher characteristics is the study by Ryans (1960). This study separated teacher characteristics into three basics with a variety of subproperties. Xo is the characteristics of understanding of students and friendliness opposed to aloofness and egoism. Yo refers to the characteristics of teachers indicating a systematic or business-like approach opposed to an evading or unplanned approach in the classroom. Zo refers to the ability of a teacher to be stimulating and imaginative in his approach to his student opposed to the teacher who uses

dull and routine methods. These characteristics will be referred to with respect to many of the factors to be considered.

The first factors considered were from the application blank.

Age may be a highly predictive factor. Ryans found that young teachers were significantly higher in factors Xo and Zo, but lower in Yo. Apparently, the relationship is curvilinear with respect to Xo because teachers beyond the age of 55 are significantly lower for this factor (Ryan, 1960, p. 289). Math and science teachers, however, do not show a decline in the area of Zo. For the purpose of this study, age was included as a factor.

Buley (1950) indicated that a highly desirable attribute for a school system was origin of at least half the staff outside the state. A dichotomy was established for this factor; either the applicant was born within or outside the state.

Marital status of teachers was considered in the study by Ryans (1960, p. 132). The correlations between status and effectiveness varies in terms of criterion but a general pattern was discernible. In the elementary grades, married or divorced teachers appear to be superior to single or widowed teachers.

Teaching is considered a career which allows for upward mobility in socio-economic status. The occupation of the applicant's father was assumed to be a measure of present socio-economic level. The occupations were classified by the Warner (1963) scale.

> 1a. unskilled labor; 1b. skilled labor; 1c. skilled craft (set within shop type structure); 2a. management aid (supervisor, secretary, salesman; 2b. management, and 3. professional (law, medicine, engineering). Farmers are placed in 2b if they own their own farms. Teachers are placed in 3. by virtue of their educational level.

White (1962) suggested a history of teaching in the family as a predictor of effectiveness.

Previous experience in working with children, either as a teacher or in other capacities, was considered.

The second set of factors are those obtainable from the applicant's college transcript.

Overall grade point average has been shown by many studies to be a reliable predictor of effectiveness. An average in excess of C+ appears to be essential (Barr, 1961, p. 50).

Fielstra (1963) found that rating given for competence during student teaching were significant in predicting first year success in teaching. The qualities sought by student teacher evaluators were almost identical to those indicated by principals as most important; adaptability, skill in planning, carrying out plans, resourcefulness, and achievement of discipline. Barr (1960, p. 77) indicated principals and supervisors most often rated as superior those teachers who earned an A in student teaching. All teachers as rated superior on any criterion had a student teaching grade of at least B.

Ryans' (1960) study indicated student teaching grades may be predictive of success.

A second category of academic success are grades obtained in education classes. Barr (1960, p. 90) reported a study done by Peronto where a correlation of .516 was found between professional grades and the measurement of affectiveness. Freehill (1963) found scholastic achievement as indicated by professors' ratings (grades) was a highly predictive factor. He stated that teaching competency can be predicted from this type of professional

recommendation with the same accuracy as a final exam grade can be predicted from a mid-term.

A further consideration of college courses taken by applicants which were considered is the number of subject areas included in the college career. Buley (1960) found that teaching staffs with the highest proportion of teachers who had completed courses in three or more subject areas tended to be higher scorers on the staff quality criterion. McKenna included as an indicator of success, breadth of training, which he found highly predictive. Breadth of training required that the teacher have completed two or more classes in three or more subject areas.

The number of graduate hours completed by applicants were used as a possible predictor. Slezak (1959) found an advanced degree in administration was one of the five best predictors of success of teachers.

A final factor obtainable from the transcripts was type of college attended. Turner (1964) indicated teachers who had attended schools of 1000, or larger, enrollment scored significantly higher on the Minnesota Teacher Attitude Survey, and showed significantly greater growth in teaching ability between the first and third years of teaching. Teachers from schools of under 1000 students showed no increase over student teacher grades after three years of teaching experience. Ryans (1950, p. 310) compared teacher effectiveness related to the type of college attended as well as the size of the college. For elementary teachers, graduates of large universities were significantly higher in areas Xo, Yo, and Zo.

Combinations of size and type of school were included in this study.

In summary, the following items of information were collected for 159

elementary teachers who completed three years of teaching:

1. The Final Service Appraisal.

   This final rating was assumed to be the most accurate estimate of a teacher's ability. This measurement was used to define "success" as a teacher.

2. Application Blanks

   Information from the application blanks was considered under three categories -- personal characteristics, academic preparation, and prior work experience.

   a. Personal Characteristics: (1) sex, (2) age, (3) marital status, (4) number of children, both in and out of school, and (5) father's occupation.

   b. Academic Preparation: consisted of (1) number and type of colleges and / or universities attended, (2) qualifications to teach art, music, and penmanship, (3) advanced degrees received, and (4) hours of educational training (and if education was major field of study).

   c. Prior Work Experience: includes (1) teaching experience, (2) other work experience, and (3) other work experience with children.

3. Transcripts: Three General Items were Considered

   a. Grade Point Average for: (1) sophomore year, (2) educational courses, and (3) student teaching.

   b. Methods Courses for: (1) elementary subjects, and (2) working with exceptional children.

   c. Advanced Preparation in Education

ANALYSIS OF RESULTS

The 159 teachers received final ratings as follows: 67 received the highest possible appraisal, 84 received the next highest appraisal, and 8 received an average appraisal (assuming the middle rating on a five part scale is average). No teachers received either of the below average ratings. While this is undoubtedly a most desirable situation from the employment standpoint, the narrow spread of criterion ratings does present considerable difficulty in developing predicting variables.

The initial analysis was to compare the final rating with each of the twenty-nine predictors to determine which combinations of predictors up to and including all possible predictors would make the "best" (in terms of most accurate) estimate of final rating.

Multiple regression analysis of the twenty-nine predictors developed a prediction equation that was sixty per cent accurate in forecasting the final rating of the teachers (as superior or above average).

The increase in predictive ability over chance does not appear sufficient to warrant further investigation of this particular concept.

The suggested implications that can be drawn from this analysis are: (1) supervisors employ only individuals who are classified as "superior" or "above average" as teachers, or (2) a measuring instrument which will more accurately reflect teacher effectiveness should be developed.

For the 159 teachers the computed correlation coefficients were as follows:

VARIABLE	CORRELATION
Sex	-0.000
Age	-0.027
Marital Status	
Single	-0.059
Married	0.028
Divorced	0.089
Widowed	-0.025
Separated	-0.009
Number of Children	0.099
Number of Children of School Age	-0.075
Father's Occupation	-0.041
Qualified to Teach Art	0.001
" " " Music	0.110
" " " Penmanship	0.043
Number of Colleges Attended	-0.113
Size of College (Large, Small)	0.066
Advanced Degree Received	0.048
Institution Attended	
State University	0.063
Private University	0.094
State College	-0.151
Teacher College	0.101
Private College	0.170
In-State College	0.072
Out-of-State College	-0.079
Number of Hours in Education	-0.056
Major in Education	-0.125
Prior Teaching Experience	0.000
Other Work Experience	-0.050
Work Experience with Children	0.081
College (Sophomore Year) G.P.A.	-0.055
College (Education Course) G.P.A.	-0.043
Student Teaching G.P.A.	-0.014
Courses on Teaching Mathematics	-0.031
Courses on Teaching Reading	-0.118
" " " Social Studies	-0.081
" " " Science	-0.050
" " " Language Arts	-0.084
" " " Gifted Children	-0.086
" " " Disturbed Children	-0.036
" " " Retarded Children	-0.007
Advanced Quarter Hours in Education	0.041

Stepwise Regression of the Variables Developed the Following Multiple R:

VARIABLE	MULTIPLE R	R^2
Major in Education	0.1250	0.0156
Qualified to Teach Music	0.1765	0.0311
Methods Course in Teaching Reading	0.2077	0.0431
Methods Course in Teaching Gifted Students	0.2232	0.0498
Advanced Degree	0.2392	0.0572
Age	0.2510	0.0635

BIBLIOGRAPHY

A. S. Barr. Wisconsin Studies of the Measurement and Prediction of Teacher Effectiveness, Dembar Publishers, Madison, Wisconsin, 1961. p. 77

Henton C. Buley, "Personal Characteristics and Staff Patterns Associated with the Quality of Education" (unpublished Ed. D. project Columbia University, New York, 1950).

M. F. Freehill, "Prediction of Teaching Competence," Journal of Experimental Education, March, 1963.

C. Fielstra, "Discriminating and Predictive Values of Ratings Given to UCLA Student Teachers," California Journal of Educational Research, January, 1963.

C. F. Loedel, "Administrative Guide to Employment Procedures," National Association Secondary School Principals Bulletin, October, 1961.

Lloyd N. Morrisett, Letters of Recommendation, Teachers College, Columbia University, New York, 1935. p. 143.

David G. Ryans. Characteristics of Teachers, American Council on Education, Washington, D. C., 1960.

James M. Slezak, "An Extension of Studies Concerning the Relationships of Staff Characteristics," (unpublished dissertation, Teachers College, Columbia University, New York, 1959)

R. S. Turner. Contemporary Research on Teaching Effectiveness, Holt, Rinehart and Winston, New York, 1964. p. 83.

Lloyd W. Warner. Yankee City, New Haven, Conn., Yale University Press, 1963.

W. T. White, "Personnel Pandemonium or Positive Prediction," Peabody Journal of Education, May, 1962, p. 346.